

## Safety Data Sheet

according to Regulation (EC) No 1907/2006 (REACH)  
Classifications according to Regulation (EC) No 1272/2008.  
Printdate 07 Jul 2024

## 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1. Product name:

1,2-Dichloroethane

### 1.1. Catalog No.:

675604

### 1.2. Relevant identified uses of the substance or mixture

Identified: Laboratory chemical  
uses: R&D

### 1.3. Uses advised against:

HPC Standards GmbH  
Am Wieseneck 7

04451 Cunnersdorf  
Deutschland

Tel. +49 34291 3372-36  
Fax. +49 34291 3372-39  
contact@hpc-standards.com

### 1.4. Emergency telephone number

HPC Standards Tel. +49 34291 3372-36  
This number is only available during office hours.

## 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture  
Classification according to Regulation (EC) No 1272/2008  
Flammable liquids (Category 2), H225  
Acute toxicity, Oral (Category 4), H302  
Acute toxicity, Inhalation (Category 3), H331  
Skin irritation (Category 2), H315  
Eye irritation (Category 2), H319  
Carcinogenicity (Category 1B), H350  
Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335  
For the full text of the H-Statements mentioned in this Section, see Section 16.  
Classification according to EU Directives 67/548/EEC or 1999/45/EC  
F Highly flammable R11  
R45  
Xn Harmful R22  
Xi Irritant R36/37/38  
T Toxic R23

### 2.2. Label elements

#### 2.2.1. Pictogram



## 2.2.2.

### 2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram Signal word Danger

Hazard statement(s)

H225 Highly flammable liquid and vapour.

H302 Harmful if swallowed.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H331 Toxic if inhaled.

H335 May cause respiratory irritation.

H350 May cause cancer.

Precautionary statement(s)

P201 Obtain special instructions before use.

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P261 Avoid breathing vapours.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P311 Call a POISON CENTER or doctor/ physician.

Supplemental Hazard

Statements

none

Restricted to professional users.

### 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances

Synonyms : Ethylene dichloride

Ethylene chloride

Formula : C<sub>2</sub>H<sub>4</sub>Cl<sub>2</sub>

Molecular weight : 98,96 g/mol

CAS-No. : 107-06-2

EC-No. : 203-458-1

Index-No. : 602-012-00-7

Registration number : 01-2119484658-20-XXXX

Hazardous ingredients according to Regulation (EC) No 1272/2008

Component Classification Concentration

Ethylene dichloride Included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH)

CAS-No.

EC-No.

Index-No.

Registration number

107-06-2

203-458-1

602-012-00-7

01-2119484658-20-XXXX

Flam. Liq. 2; Acute Tox. 4;

Acute Tox. 3; Skin Irrit. 2; Eye

Irrit. 2; Carc. 1B; STOT SE 3;

H225, H302, H315, H319,

H331, H335, H350

&lt;= 100 %

Hazardous ingredients according to Directive 1999/45/EC

Component Classification Concentration

Ethylene dichloride Included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH)

CAS-No.

EC-No.

Index-No.

Registration number

107-06-2

203-458-1

602-012-00-7

01-2119484658-20-XXXX

F, T, Carc.Cat.2, R45 - R11 -

R36/37/38 - R23 - R22

<= 100 %

#### 3.1.1. Formula

C<sub>2</sub>H<sub>4</sub>Cl<sub>2</sub>

#### 3.1.2. Molecular Weight (g/mol)

98.96

#### 3.1.3. CAS-No.

107-06-2

### 4. FIRST AID MEASURES

#### 4.1 Description of first aid measures

##### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

##### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

##### In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

##### In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

##### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

#### 4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

#### 4.3 Indication of any immediate medical attention and special treatment needed

No data available

## 5. FIRE-FIGHTING MEASURES

### 5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

### 5.2 Special hazards arising from the substance or mixture

Carbon oxides, Hydrogen chloride gas

### 5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

### 5.4 Further information

Use water spray to cool unopened containers

## 6. ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

For personal protection see section 8.

### 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

### 6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

### 6.4 Reference to other sections

For disposal see section 13

## 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

For precautions see section 2.2.

### 7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

Components with workplace control parameters

### 8.2 Exposure controls

Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

Personal protective equipment

Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.

Wash and dry hands. Body Protection

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing.. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains

## 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a) Appearance Form: clear, liquid

Colour: colourless

b) Odour No data available

c) Odour Threshold No data available

d) pH No data available

e) Melting point/freezing point

Melting point/range: -35 &deg;C - lit.

f) Initial boiling point and boiling range

83 &deg;C - lit.

g) Flash point 13,0 &deg;C - closed cup - Tested according to Annex V of Directive 67/548/EEC.

h) Evaporation rate No data available

i) Flammability (solid, gas) No data available

j) Upper/lower flammability or explosive limits

Upper explosion limit: 16,2 %(V)

Lower explosion limit: 6,2 %(V)

k) Vapour pressure 33,3 hPa at 0 &deg;C

86 hPa at 20 &deg;C - Tested according to Annex V of Directive 67/548/EEC.

312 hPa at 50 &deg;C

l) Vapour density No data available

m) Relative density 1,256 g/mL at 25 &deg;C - lit.

n) Water solubility 8,69 g/l at 20 &deg;C - Tested according to Annex V of Directive 67/548/EEC. - slightly soluble 10,3 g/l at 56 &deg;C

o) Partition coefficient: noctanol/water

log Pow: 1,48 at 20 &deg;C - Tested according to Annex V of Directive 67/548/EEC.

p) Auto-ignition temperature

413,0 &deg;C

q) Decomposition temperature

No data available

r) Viscosity No data available

s) Explosive properties No data available

t) Oxidizing properties No data available 9.2 Other safety information

Surface tension 32,9 mN/m at 15 &deg;C

32,2 mN/m at 20 &deg;C

30,8 mN/m at 30 &deg;C

## 10. STABILITY AND REACTIVITY

- 10.1 Reactivity  
No data available
- 10.2 Chemical stability  
Stable under recommended storage conditions.
- 10.3 Possibility of hazardous reactions  
No data available
- 10.4 Conditions to avoid  
Heat, flames and sparks. Extremes of temperature and direct sunlight.
- 10.5 Incompatible materials  
Strong oxidizing agents
- 10.6 Hazardous decomposition products  
Other decomposition products - No data available  
In the event of fire: see section 5

## 11. TOXICOLOGICAL INFORMATION

- 11.1 Information on toxicological effects
  - Acute toxicity
  - LD50 Oral - Rat - 670,0 mg/kg
  - LC50 Inhalation - Rat - 4 h - 3,879 mg/l
  - LD50 Dermal - Rabbit - 2.800 mg/kg
  - Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste): Eye: Lacrimation.
  - Skin corrosion/irritation
  - Skin - Rabbit
  - Result: irritating - 72 h  
(Draize Test)
  - Serious eye damage/eye irritation
  - Eyes - Rabbit
  - Result: Moderate eye irritation
  - Respiratory or skin sensitisation
  - No data available
  - Germ cell mutagenicity
  - Laboratory experiments have shown mutagenic effects.
  - Ames test
  - S. typhimurium
  - Result: positive
  - Carcinogenicity
  - Carcinogenicity - Rat - Oral
  - Tumorigenic: Carcinogenic by RTECS criteria. Gastrointestinal: Tumors. Skin and Appendages: Other: Tumors.
  - This product is or contains a component that has been reported to be probably carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification.
  - Possible human carcinogen
  - IARC: 2B - Group 2B: Possibly carcinogenic to humans (Ethylene dichloride)
  - Reproductive toxicity
  - Reproductive toxicity - Rat - Inhalation
  - Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants).
  - Specific target organ toxicity - single exposure
  - May cause respiratory Irritation
  - Specific target organ toxicity - repeated exposure
  - No data available
  - Aspiration hazard
  - No data available
  - Additional Information
  - RTECS: KI0525000
  - Acts as a simple asphyxiant by displacing air., anesthetic effects, Difficulty in breathing, Headache, Dizziness, Prolonged or repeated contact with skin may cause: defatting, Dermatitis, Contact with eyes can cause: Redness, Blurred vision, Provokes tears., Effects due to ingestion may include: Gastrointestinal discomfort, Central nervous system depression, Paresthesia., Drowsiness, Convulsions, Conjunctivitis., Pulmonary edema. Effects may be delayed., Irregular breathing., Stomach/intestinal disorders, Nausea, Vomiting, Increased liver enzymes., Weakness, Heavy or prolonged skin exposure may result in the absorption of harmful amounts of material.
  - Pancreas. -

## 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

Toxicity to fish LC50 - Oncorhynchus mykiss (rainbow trout) - 225,00 mg/l - 96 h

NOEC - Cyprinodon variegatus (sheepshead minnow) - 130 mg/l - 96 h

Toxicity to daphnia and

other aquatic

invertebrates

EC50 - Daphnia magna (Water flea) - 540,00 mg/l - 24 h

Immobilization EC50 - Daphnia magna (Water flea) - 160 mg/l - 48 h

### 12.2 Persistence and degradability

Biodegradability Biotic/Aerobic - Exposure time 21 d

Result: < 20 % - Not readily biodegradable.

Remarks: Not applicable

### 12.3 Bioaccumulative potential

Bioaccumulation Lepomis macrochirus (Bluegill) - 14 d

- 95,6 µg/g

Bioconcentration factor (BCF): 2

### 12.4 Mobility in soil

No data available

### 12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

### 12.6 Other adverse effects

No data available

## 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product

## 14. TRANSPORT INFORMATION

### 14.1 UN number

ADR/RID: 1184 IMDG: 1184 IATA: 1184

### 14.2 UN proper shipping name

ADR/RID: ETHYLENE DICHLORIDE

IMDG: ETHYLENE DICHLORIDE

IATA: Ethylene dichloride

### 14.3 Transport hazard class(es)

ADR/RID: 3 (6.1) IMDG: 3 (6.1) IATA: 3 (6.1)

### 14.4 Packaging group

ADR/RID: II IMDG: II IATA: II

### 14.5 Environmental hazards

ADR/RID: no IMDG Marine pollutant: no IATA: no

### 14.6 Special precautions for user

No data available

## 15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Authorisations and/or restrictions on use

Ethylene dichloride CAS-No.: 107-06-2

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).

Carcinogenic (article 57a)

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

## 16. OTHER INFORMATION

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide.

The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. For lab use only!